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ABSTRACT

A study evaluated the effectiveness of a teacher-researcher program begun in the Fort Worth Indpendent School District to improve and assess students' writing abilities. The study sought to determine if there was a noticeable improvement in the writing skills of students studying with the teacher-researchers as opposed to students studying with nonparticipants. All teachers had their students complete two pieces of timed writing on topics previously proved successful in the district. The holistic method, through which readers are encouraged to view a piece of writing as more than the mere sum of its parts, was used to assess the papers. Considered as a group, writing samples submitted by students of teacher-researchers showed an improvement in average scores. In five of the six grades evaluated, the writing of teacher-researchers' students showed greater improvement than did the writing of the comparison group, but the writing of the comparison group students showed improvement in only two of the six grade levels. (Tables of data are included.) (NKA)

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Beginning a Teacher-Researcher Program: The First Steps

With growing concern over the writing abilities of students from first through twelfth grades, school districts are constantly seeking models by which to improve and assess the writing abilities of their students. In Texas' Fort Worth Independent School District, the desire to increase literacy--and to implement the most reliable and valid means by which to establish increased literacy--prompted the administration to approve a Teacher-Researcher project in the summer of 1985 that would, if successful, serve as a model for further in-service teacher training in writing. In the following few pages, we would like briefly to summarize our project and its evaluation methods in order to introduce other teachers and administrators to a system that promises to yield initial information about the effectiveness of writing programs.

The Teacher-Researcher movement, as chronicled and defined by Dixie Goswami, tells us that a research-based approach to teaching writing allows teachers to become theorists who articulate and test their instructional assumptions. As they form communities that share the efforts and outcomes of research, Teacher-Researchers are able to generate information critical to our answering pressing questions about the complex, subtle realities of the classroom. Structured upon the beliefs of the Teacher-Researcher movement, our program consisted of three stages. First, our program participants--twenty-one Fort Worth I.S.D. kindergarten through twelfth-grade teachers--received three weeks of intensive training in the theory and practice of writing instruction, ways by which to help students understand and implement processes conducive to successful writing. We also examined current methods of documenting and evaluating data concerning writing and learning processes. Second, these teachers returned to the

classroom the next fall to apply the techniques in which they had been trained and to gather data on specific questions about the writing-learning process that they had formulated and wished to answer through research. Third, the teachers reassembled periodically to share their data gathering procedures and research findings with what was to become a community of Teacher-Researchers.

In an effort to discern the effectivensss of our training program and to train our teachers further in evaluation methods, we gathered assessment data on our own program. The purpose of our investigation was to discover if there was a noticeable improvement in the writing skills of students studying with our Teacher-Researchers as opposed to students studying with non-participants. We matched the Teacher-Researchers' students with the students of teachers who had not attended the intensive training workshops but who volunteered to participate in out study. In all cases, the Teacher-Researchers were matched with teachers of comparable experience and their students were matched with students of comparable grade levels and socio-economic status.

We asked all teachers concerned to have their students complete two pieces of timed writing on topics previously proven successful in the District. The first of these timed writings occurred in October of 1985 and served as our pre-test; the second occurred in May of 1986 and served as our post-test. From the 2200 writing samples submitted after each timed-writing, 468 papers, a random sampling, were pulled for assessment: 288 papers from the students of Teacher-Researchers and 180 papers from the students of non-participants. (The difference in the number of papers pulled from our two groups simply reflects the fact that a greater percentage of the 2200 contributing students were students of Teacher-Researchers.)

We adopted the holistic method of assessing these papers, a method through which readers are encouraged to view a piece of writing as more than the mere sum of its elementary parts. (For more on the issues theories, and practice of holistic evaluation, see: Cooper and Odell; Myers; Ruth and Murphy; White; Greenberg, Wiener, and Donovan.)
In order to prepare themselves for the assessment, one week before the evaluation the Teacher-Researchers spent one day making test development decisions. The teachers reviewed papers from each of the grade levels assessed--first, third, sixth, eighth, ninth, eleventh, and twelfth--in order to select sample training papers for the reader training session. These training papers were chosen to represent the compositional effectiveness of each level of the six-point assessment scale that we used, as well as to suggest the variety of papers that could occur at each level. In the process of selecting these papers, our Teacher-Researchers also described the compositional traits of each level of the six-point scale--traits such as topic development, unity, sentence variety, word choice, punctuation, and grammar. The articulation of these traits developed into a scoring guide that would supplement the sample training papers in the readers' training session to take place just before scoring began.

It is the practice in holistic scoring to have each paper read and scored by two readers and to award the paper a final score that is the sum of its two scores. Therefore, in addition to selecting the training papers and developing the scoring guide, our Teacher-Researchers determined what degree of discrepancy between two scores was acceptable. Our participants agreed that papers receiving scores that differed by more than two points (i.e.,: 6+3, 5+2, and so on) would be given to a

third reader and the paper would be awarded the sum of the third reader's score and the previous score closer to that. Additionally, based on the quality of the writing occurring at each level, our Teacher-Researchers decided that the minimum acceptable level of writing for this assessment, the cut-score, would be a cumulative score of seven.

When the scoring day arrived, our readers--District teachers whose students were not involved in the assessment--were trained with the Teacher-Researchers' sample training papers and scoring guide in the hour before actual scoring began. At the end of the morning's work in which 468 papers were scored, we found that we had achieved outstanding inter-reader reliability for our assessment:

Table 1

Percentage of Agreement Among Evaluators

	Pre-Tests	Post-Tests
Grade 1	97%	100%
Grade 3	95%	92%
Grade 6	94%	97%
Grade 8	92%	92%
Grade 9	91%	98%
Grade 11	82%	100%
Grade 12	100%	100%

Since 80% inter-reader reliability is considered acceptable in an holistic evaluation, we were pleased that our scoring was so very accurate, and we then felt secure in further analysis of the data in order to see if and how the average scores and the cut scores of the two groups of

evaluated students differed.

Considered as a group, writing samples submitted by students of Teacher-Researchers showed an improvement in average scores, as the table below indicates:

Table 2

Comparison of Averages of Students' Scores

	Teacher-Researchers' Students		Comparison Group Students	
	Average Score on Pre-Test	Average Score on Post-Test	Average Score on Pre-Test	Average Score on Post-Test
Grade 1	8.2	9.2	6.8	7.4
Grade 3	4.7	5.4	6.6	6.4
Grade 6	6.0	8.3	7.7	6.8
Grade 8	6.0	6.6	5.4	5.8
Grade 9	6.6	7.5	4.1	3.9
Grade 11	8.6	8.3	8.7	8.3

Although writing samples from students in the control group revealed the average post-test score that was .12 of a point lower than the average pre-test score, the average score the the post-tests of Teacher-Researchers' students was .87 of a point higher than the average score for their pre-tests. Indeed, this pattern of improvement of the students of Teacher-Researchers is consistent across grade levels. In five of the six grades evaluated, the writing of Teacher-Researchers' students showed greater improvement than did the writing of the comparison group, but the writing of the comparison group students showed improvement in only two of the six grade levels.

(As we discussed above, we were unable to match the number of students from each level, but we were unable to find any comparison group whatsoever for our Teacher-Researchers' sixth grade special education and twelfth grade students. We considered it important, however, to assess both of these groups so that we would have a more complete picture of the effects of our program. Consistent with our other populations, we found improvement in both levels: the average pre-test score for the sixth graders was 5.6, while the average post-test score was 8.25. Similarly, the average pre-test score for the twelfth graders was 5.8, while the post-test scores were 7.0.)

As a group, the writing samples from students of our Teacher-Researchers also showed considerable improvement in the increased number of papers whose scores totaled seven:

Table 3

Comparison of % of Essays Receiving a Score of 7 or Higher

	Teacher Researchers' Students		Comparison Group Students	
	Pre-Test % of Papers with 7 or higher	Post Test % of Papers with 7 or higher	Pre-Test % of Papers with 7 or higher	Post-Test % of Papers with 7 or higher
Grade 1	71%	100%	61%	67%
Grade 3	17%	35%	43%	43%
Grade 6	37.5%	80%	68%	55%
Grade 8	45%	42.1%	33.1%	38.9%
Grade 9	50%	69%	11%	11%
Grade 11	81%	77%	85%	82%

On the pre-test samples, an average of 50.25% of the Teacher-Researchers' students received a score of 7 or better, and on the post-test an average of 67.18% of these students received a score of at least 7. By contrast,

scores of comparison group students showed an overall decrease. On their pre-tests, the average percentage of papers with acceptable scores was 50.18%--a percentage suggesting that these students were of comparable writing ability with the Teacher-Researchers' students--yet the post-test writing samples of students in the control group revealed that their scores actually had decreased to 49.48%. Moreover, just as the average scores of the Teacher-Researchers' students had increased across grade levels, so too did these students illustrate gains in their ability to achieve the cut score of seven. That is, among the students of Teacher-Researchers, four of the six grade levels showed an increase in the percentage of students who achieved a minimally acceptable score, while only two of the six grade levels of the comparison groups revealed an increase.

(As in the case of their average scores, the level of acceptability of the sixth grade special education students and the twelfth grade students showed substantial increase. While the sixth grade students showed in pre-test that only 33% had achieved a score of 7 or above, 83% of the students had achieved this score or better on the post-test. Similarly, only 41% of the twelfth grade students had achieved the cut-score in the pre-test, but upon post-test 66% were able to achieve at least a score of 7.)

We found, then, that the writing of our Teacher-Researchers' students showed substantial gains in both average scores and increased level of competency. We were also aware, though, that this form of evaluation would not, taken by itself, indicate the processes of instruction that the students received. Are teachers, for example, having their students write in different modes for different audiences? Are the students practicing

revision? Peer evaluation? Clearly, these concerns also had to be addressed.

In order to provide a record of instruction regarding how the writing process was taught, we asked our Teacher-Researchers to keep a writing folder over the year for each student. Included in each folder were to be the results of at least six process-oriented writing assignments: a copy of the assignment, notes (or other informational writing) by which the students gathered information, an initial draft, a reader commentary sheet completed either by peer or teacher, and the revised draft. In order to assess the folders themselves, we simply designed a content-specific checklist which would allow us to discover information--peer revision sheets, for instance, or the absence of them--about how the process approach of teaching writing was being executed. Although we are still examining and refining the folder evaluation part of our Project, we have found that teachers can practically maintain writing folders for their students and that these folders will yield more complete information about the students' writing ability than will, say, the results of a multiple choice end of semester test.

Thus we had employed two measures--one product, the other process oriented--in order to better assess the writing abilities of those students studying with our Teacher-Researchers. We found improvement in these students, and we believe that we discovered facets of program development just as significant for the teachers themselves and their District. We will close with three of our findings.

<u>The best program development practices incorporate patience.</u>

In implementing the Teacher-Researcher Project, we came to realize that it would take time to gather definitive information on our methods and their results, and thus we came to realize that "problems" with our initial assessment attempt are only understood to be "weaknesses" if we hold that

we have "irrefutable proof" that our methods produce stronger writing abilities in students. At present, we would only claim that the results of this year's work are encouraging and that, over a period of time, we will discover more exact methods by which to teach, research, and evaluate student writing.

Patience affords a sense of community.

Our Teacher-Researchers, in pursuing both their individual research projects and our holistic evaluation, have become a more unified group. They communicate with each other frequently to discuss how to combine ideas and methods, and so the harmful boundaries which separate theory from practice begin to dissolve: our Teacher-Researchers formulate imaginative heuristics, test their assumptions, and refine them to create other imaginative heuristics. These teachers, therefore, believe themselves to be neither mechanical pedagogues nor abstract theorists; simply and wonderfully, they see themselves as producers of knowledge.

A sense of community restores confidence.

Mandatory competency testing for both teachers and their students, criteria-based classroom procedures, too much paper work and too little money--these are issues in the lives of all teachers which often seem more likely to bury education than improve it. Yet the sense of confidence through community implicit in the Teacher-Researcher concept encourages the classroom teacher to remember that teaching is a vocation and not merely a job. We have found that our Teacher-Researchers strive to find creative, intelligent ways to integrate educational issues into their classrooms. For instance, instead of abandoning the assessment of their students to so-called specialists, our Teacher-Researchers have found that

they are able to reliably and validly assess large samples of writing through direct methods. Instead of viewing assessment as a singular, closed act, our Teacher-Researchers are able to refine the by-products of their research--strategies for question design, methods for selecting sample papers, ways for describing the elements of these papers, ideas for using these models and descriptors back in the classroom--and to share these by-products with other teachers. In other words, our Teacher-Researchers realize the value of their work and are confident enough in its pursuit to involve other educators in classroom-based inquiry.

As we begin the second year of our Teacher-Researcher Project, we are encouraged most in that our Teacher-Researchers have begun to establish the means by which school districts are turned into investigative communities. We believe that our Project can help to create an environment in which occur the everyday miracles of transformation.

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